THE ONTARIO MENTAL HEALTH FOUNDATION

annual report 1987/88

89-00842/

The Ontario Mental Health Foundation

Established by Special Act of Legislature of the Province of Ontario, 1960-61.

Members as at March 31, 1988

Marlene Longdon, R.N., M.Sc.N.
Chairman, Burlington

Sidney Freedman, LL.B.
Vice-Chairman, Toronto

Pierrette Beaudoin,
L'Orignal

Rita Chrolavicius, LL.B.
Toronto

Peter Ferreira, B.A.
Mississauga

Russell Jacobson, B.S.B.A.
Willowdale

Richard Neufeld, Ph.D.,
London

Iris Owen, R.N.
Toronto

David Quibell
Markham

Rochelle Reingold
Richmond Hill

Wayne Squibb, B.A.
Toronto

Vivian Wood, B.Sc.N., M.Ed.
London

Staff

Dugal Campbell, Ph.D.,
Executive Director

Margaret Clark,
Director, Finance and Administration

Louise Brown

Anita Macatangay

Jessie Paterson

Audrey Stefanovich

Chairman's Report

The 1987-88 year has been a productive and rewarding year for the Ontario Mental Health Foundation. Members of the Board of Directors and staff alike have worked diligently to put into action the recommendations of the External Review Committee (June 1986) and the Management Review Report of the Ministry of Health (June 1987).

The process of implementation began in July of 1987 with two full planning days which resulted in the Board's increased involvement with and commitment to the objectives of the Foundation; namely:

1. To support research which will improve and enlarge the knowledge required to promote mental health and to prevent, treat and cure psychological disorders;

2. To collect information about mental illnesses and all the sciences bearing upon mental illness so that the Foundation may actively plan programmes of research which will maximize the benefits to be expected from the funds available to subsidize research;

3. To provide information and instruction to practitioners so that knowledge generated by investigation is disseminated and promptly used; and

4. To communicate to the general public the results of research and to develop among lay people informed opinions about the promotion of mental health and the prevention and treatment of mental illness.

To facilitate achievement of these objectives, a number of programmes are planned and important changes have been initiated. First, a Planning and Priorities Committee of the Board has been established. This committee will direct the development of policy and the implementation of the Foundation's objectives. Second, the roles and responsibilities of the executive staff have been redefined in terms of the new priorities and the increased emphasis on scientific development and research.

Dr. Dugal Campbell has assumed a full-time position as Executive Director and will be responsible for carrying out the policy directions adopted by the Foundation, for setting the long-term strategic direction of the Foundation and for divising medium and short-term plans.

Mrs. Margaret Clark will assume the post of Director, Finance and Administration, with responsibility for executing the Foundation's policies, managing and administering the Foundation's office and the detailed process of funding allocation and management of the Foundation's finances.

These changes, together with the planned computerization of the Foundation's data collection processes will increase the Foundation's capacity for efficient planning and provision of vital information to both the scientific community and the general public.

An important commitment which has not changed is the Foundation's support of research in the field of mental health and mental disorders. In the 1987-88 fiscal year $2,080,823. was awarded to the Research Grant Programme. Equally important is the Individual Award Programme that allows researchers to develop expertise crucial to mental health research in Ontario. This programme receives $1,084,290. in awards. The management of these two programmes would have been impossible without the work of the Research Committee under the Chairmanship of Dr. R. Capek and the Fellowships Committee under the Chairmanship of Dr. A. MacLean. The OMHF also managed a research competition for the Ministry of Community and Social Services and awarded $761,442. in grants. The review committee for this competition was chaired by Dr. V. Quinsey. I would like to express the gratitude of the Board to the members of these three committees for the generous donation of their time and expertise.

The Foundation's commitment to research in the areas of primary prevention and community mental health interventions has received generous and encouraging support from the Ministry in the form of a $480,000. one-time special grant awarded by the Honourable Elinor Caplan, Minister of Health. The Foundation will shortly announce a competition targeted at applied research in these very important areas. It is hoped that the results of such research will enable the Foundation to achieve more effectively its mandate to prevent, cure and treat mental illness.

The Foundation commends the Ministry of

Health for its commitment to mental health research in Ontario and supports wholeheartedly the emerging partnership of the Ministries of Health and Community and Social Services in the field of mental health research.

I wish to thank the members of the Foundation, its' dedicated staff and the practitioners and researchers who have contributed so much to the actualization of our goals.

Marlene Longdon, Chairman July 1988

Report on the Scientific Work of the Foundation

During the seven months from September 1987 to March 1988, a substantial effort has been put into reviewing, with members of the Foundation and representatives of the scientific community, the research policies and programmes of the Foundation. This review built on the external evaluation of the Foundation made in 1986 by a group of independent scientists and the work of a committee of the Foundation which met in the Spring and Summer of 1987 to examine the Foundation's priorities. The external evaluation and the Foundation's priorities committee had led to the definition of a number of areas in which a careful review of Foundation's research work was in order.

The first of these reviews took place during the Fall and Winter months. The review was carried out by the Priorities and Planning Committee of the Foundation; to assist the committee, working parties of scientific advisors were set up to examine the Foundation's fellowships programme and the Foundation's research grant programme. A careful review was made of the Foundation's current programmes to show the nature of the work which had been supported, the cost of each programme and projections of costs for the future. The Foundation was fortunate in having the advice of scientists with experience both as active investigators and as scientific administrators. The Foundation wishes to acknowledge the advice and information provided by:

Dr. Radan Capek (McGill)
Dr. Alistair MacLean (Queen's)
Dr. Duncan MacCrimmon (McMaster)
Dr. Jim Neufeld (Western)
Dr. Tom Ryan (Carleton)

The analysis of the working parties led to a number of proposals for changes in the Foundation's research grants programme and fellowships programme. These have been approved by the Foundation and will come into force for the first time at the Fall competition of 1988. A major result of the review has been the adoption of three principles which will guide the Foundation in carrying out its first objective, i.e. to support research. The principles are:

1. The first criterion in awarding funds must be the scientific quality of the proposed work. The best interests of the Foundation and the public will be served only if excellent applications for awards come forward, and from a wide range of research interests.

2. Given the limits of the Foundation's resources and the many aspects of mental disorder, the Foundation can serve the Province best by promoting work on a broad range of topics. Therefore, the Foundation should not be identified with any one research focus.

3. In scientific research one aims at a moving target. The Foundation should, therefore, adopt policies that permit changing the mix of research and that allow new investigators to enter the field.

The statement of objectives adopted by the Foundation prescribes education programmes designed, first, to introduce the work of the Foundation to investigators in the Province so that all whose work bears on mental health are aware of the possibility of obtaining grants from the Foundation; and, second, professional and lay education. The Foundation staff will make visits to Provincial institutions to ensure that the Foundation's policies and new programmes are widely advertised to potential applicants. In addition, the Foundation has begun to prepare a series of workshops on community mental health; the audience envisaged for these workshops will be workers

in mental health services and the aim is to disseminate research results and research methods to front line workers.

The Foundation has been in touch with a number of other bodies active in the field of research with the aim of promoting and co-ordinating research programmes: the Assistive Devices branch of the Ministry of Health, the associate committee on research and development for rehabilitation of disabled persons of the National Research Council and the research and programme evaluation branch of the Ministry of Community and Social Services.

Foundation Programmes

As a statutory foundation, the OMHF receives most of its funds in the form of an annual grant from the Province of Ontario.

The Foundation offers 1) individual awards to those who wish to take up careers in mental health research, and 2) support for research projects undertaken by investigators who plan to do research in the field of mental health. There is also a limited programme of support for conferences and publications.

A complete listing of all research projects, major equipment grants, and individual awards funded by the Foundation in 1987-88 will be found on the following pages of the Report.

How to Apply for Grants

Copies of the Rules for Project Research, Individual Awards and application forms may be obtained from the research offices at universities in Ontario, or upon request from the Foundation.

The Ruth Schwartz Foundation Award

During 1987-88, a donation of $10,000 was received from the Ruth Schwartz Foundation. Research which will provide new knowledge about what contributes to emotional disturbances in children is of particular interest to the Schwartz Foundation.

The donation from the Ruth Schwartz Foundation, together with funds provided by the Ontario Mental Health Foundation, is supporting a study of Social Skills Training with Aggressive Children at the Earlscourt Child and Family Centre in Toronto. Dr. Debra Pepler is the principal investigator and the study is designed to provide direction for treatment programmes for aggressive children.

The Velleman Foundation Award

The Velleman Foundation was incorporated in 1974 in honour of Leonard and Leonora Velleman. The Velleman's dedicated themselves to the care and treatment of severely mentally retarded infants and in 1951 established the Ontario Home for Mentally Retarded Infants. This facility is now known as the Plainfield Children's Home and is located in the community of Plainfield, a few miles north of Belleville, Ontario. The objectives of the Velleman Foundation are simple and clear: within the field of mental retardation to support programmes and initiatives both of individuals as well as of groups; to extend research and education; and to provide supplementary assistance in special cases.

Dr. John Davis and Dr. Charles Cunningham, of the Chedoke-McMaster Child and Family Centre, are carrying out a study assisted by a grant made by the Velleman Foundation, which is designed to teach simple social skills to the mentally handicapped. The aim of this investigation is to ensure that skills, acquired in the training environment are effectively carried into daily life.

Research Scholarship for Studies in Alzheimer's Disease

The Alzheimer Society, London Chapter, recognizing the need for more research to determine the cause, methods of control and cure of Alzheimer's Disease, established a Research Scholarship to provide an opportunity for an investigator to focus his or her research in this particular area. This Scholarship was awarded to Dr. Andrius Baskys at the Playfair Neurosciences Unit of the Toronto Western Hospital, Toronto.

Dr. Baskys, a neuroscientist, is using a novel approach to compare brain cells from aged rats who showed normal learning ability with cells from the brains of aged rats who were poor learners.

The Ontario Mental Health Foundation
Statement of Financial Activities
Operating Fund
For the Year Ended March 31, 1988

	1988 $	1987 $
Revenue		
Province of Ontario	**2,875,700**	2,765,100
Investment income	**75,907**	83,486
Donations (note 2)	**131,823**	118,806
	3,083,430	2,967,392
Expenditure		
Awards		
Research grants	**2,069,852**	1,816,795
Major equipment	**23,509**	90,255
Research associateships	**381,688**	350,525
Research scholarships	**175,613**	203,304
Fellowships —		
Long-term	**149,226**	133,750
Research	**222,094**	162,984
Training awards	**24,648**	46,994
Research studentships	**88,034**	67,738
Clinical research and development scientists	**34,398**	—
In-house research	**10,186**	—
	3,179,248	2,872,345
Administration (schedule of expenses)	**278,359**	238,578
Committee meetings expenses	**33,801**	50,882
	3,491,408	3,161,805
	(407,978)	(194,413)
Transfer from Lottery Fund (note 3)	—	145,740
Transfer from COMSOC Lottery Fund (note 3)	—	61,509
(Deficiency) excess of revenue over expenditure for the year	**(407,978)**	12,836

The Ontario Mental Health Foundation
Statement of Changes in Operating Fund
For the Year Ended March 31, 1988

	1988 $	1987 $
Balance - Beginning of Year	**612,332**	599,496
(Deficiency) excess of revenue over expenditure for year	**(407,978)**	12,836
Balance - End of Year	**204,354**	612,332

Statement of Changes in Endowment Fund
For the Year Ended March 31, 1988

	1988 $	1987 $
Balance - Beginning of Year	**1,558,317**	1,432,965
Investment income	**137,280**	125,352
Balance - End of Year	**1,695,597**	1,558,317

Statement of Changes in M.C.S.S. Lottery Fund — Held in Trust (note 4)
For the Year Ended March 31, 1988

	1988 $	1987 $
Balance - Beginning of Year	**628,187**	—
Lottery grants received	**519,976**	627,320
Investment income	**29,753**	867
	1,177,916	628,187
Research grants	**643,781**	—
Balance - End of Year	**534,135**	628,187

The Ontario Mental Health Foundation
Balance Sheet as at March 31, 1988

Assets	1988 $	1987 $
Operating Fund		
Current Assets		
Cash and investments — at cost, which approximates market, plus accrued interest.	**383,920**	680,587
Advances to grantees (note 5)	**161,361**	199,024
Unspent awards receivable (note 6)	**5,582**	26,505
Other accounts receivable (note 7)	**17,825**	-
Prepaid expenses	**1,440**	848
	570,128	906,964
Fixed Assets		
Furniture and fixtures — at cost	**58,382**	57,761
Accumulated depreciation	**36,342**	33,939
	22,040	23,822
Total assets - Operating Fund	**592,168**	930,786
Endowment Fund		
Cash and investments — at cost, which approximates market, plus accrued interest	**1,695,597**	1,558,317
Total assets — Endowment Fund	**1,695,597**	1,558,317
M.C.S.S. Lottery Fund — Held in Trust (note 4)		
Cash and investments — at cost, which approximates market, plus accrued interest	**416,474**	628,187
Advances to grantees (note 5)	**117,661**	-
Total assets — M.C.S.S. Lottery Fund	**534,135**	628,187
Total Assets	**2,821,900**	3,117,290

Signed on Behalf of the Foundation

Marlene Leyton

Chairman

Vice-Chairman

The Ontario Mental Health Foundation
Balance Sheet as at March 31, 1988

Liabilities and Equity	1988 $	1987 $
Operating Fund		
Current Liabilities		
Research and equipment grants, fellowships and associateships payable	**360,718**	297,837
Accounts payable and accrued liabilities	**27,096**	20,617
	387,814	318,454
Operating Fund balance	**204,354**	612,332
Total liabilities and equity - Operating Fund	**592,168**	930,786
Endowment Fund		
Endowment Fund balance	**1,695,597**	1,558,317
Total equity - Endowment Fund	**1,695,597**	1,558,317
M.C.S.S. Lottery Fund – Held in Trust (note 4)		
M.C.S.S. Lottery Fund balance	**534,135**	628,187
Total equity - M.C.S.S. Lottery Fund	**534,135**	628,187
Total Liabilities and Equity	**2,821,900**	3,117,290

Auditors' Report to the Members of the Foundation and the Provincial Auditor

We have examined the balance sheet of The Ontario Mental Health Foundation as at March 31, 1988 and the statements of financial activities - operating fund, changes in operating fund, changes in endowment fund and changes in M.C.S.S. lottery fund for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the Foundation as at March 31, 1988 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Chartered Accountants
June 17, 1988

Toronto,
Ontario

The Ontario Mental Health Foundation
Notes to Financial Statements
For the Year Ended March 31, 1988

1. Depreciation
Depreciation of furniture and fixtures is calculated using the declining balance method at an annual rate of 10%.

2. Donations
Donations received by the Foundation are recorded in the operating fund for use in the support of research as directed by the members of the Foundation.

3. Lottery Funds
These funds were discontinued on March 31, 1987 and the remaining balances transferred to the operating fund for the support of research.

4. M.C.S.S. Lottery Fund - Held in Trust
In 1986 the Ministry of Community and Social Services (M.C.S.S.) through an Order-in-Council was awarded an interprovincial lottery allocation for 1986 - 1987 and beyond. These funds are used to support applied research and program evaluation studies related to the handicapped over a five year period. The Foundation administers these funds under agreement with the Ministry.

5. Advances to Grantees
Certain projects are approved for funding for more than one fiscal year. Advances to grantees represent unspent funds from the current year's award which are to be carried forward and added to the following year's award.

6. Unspent Awards Receivable
Unspent awards receivable represent unspent funds at the time a project ends. Grantees are required to return this money to the Foundation.

7. Other Accounts Receivable
The Foundation incurs costs in the administration of the M.C.S.S. Lottery fund which are directly reimbursed by the M.C.S.S. This amount represents the balance owing to the Foundation.

8. Award Commitments
The Foundation has made commitments of approximately $7,980,488 to fund projects over the next nine years as follows:

	$
1989	2,595,801
1990	1,892,766
1991	1,085,225
1992	702,621
1993	453,507
1994	414,216
1995	317,263
1996	271,786
1997	247,303

9. Operating Lease
The minimum annual lease payments under an operating lease for premises expiring on September 1, 1989 are $27,485 for the fiscal year 1989 and $11,452 for fiscal 1990.

The Ontario Mental Health Foundation
Schedule of Expenses
For the Year Ended March 31, 1988

	1988	1987
	$	$
Administration		
Salaries	**187,791**	139,065
Employee benefits	**17,623**	12,582
Office expenses	**44,300**	55,963
Rent	**28,803**	28,823
Consultant's fees and expenses	**7,500**	16,200
Audit and legal	**8,530**	6,590
Telephone	**4,683**	4,857
Depreciation — office furniture and fixtures	**2,403**	2,647
Educational programs	**(1,241)**	(6,107)
Sundry	**196**	218
Reimbursed by M.C.S.S.	**(22,229)**	(22,260)
	278,359	238,578

Report on research projects and individual awards (1987-88)

Research work can be described in a number of different ways, for example: as basic or applied research; or according to the nature of the scientific specialties involved, e.g. as psychological or physiological; or according to the nature of the disorders whose causes and cures are sought, e.g. depression, Alzheimer's disease. One analysis of the Foundation's research effort used a method developed by the Health Research and Development Council of Ontario and the results are reported here. The method uses a number of broad divisions to analyse the nature of the research effort, namely:

1. research aimed at the description of disorders (natural history; epidemiology) and the development of measuring devices and tests;

2. the search for basic physiological, psychological or social mechanisms underlying normal or abnormal conduct (basic research);

3. research which tests explanations (physiological, psychological or social) for a particular disorder (applied basic research);

4. studies of diagnosis, treatment and rehabilitation of a disorder (clinical research);

5. studies of health services (operations research); and

6. studies aimed at health promotion and disease prevention.

An investigation may fit into more than one category; as a consequence some decisions are near-arbitrary, however, the tables and lists below - and the pie-charts which summarize them - show the main features of the Foundation's work along this broadly conceived basic-to-applied continuum.

Summary Data

RESEARCH PROJECTS

The Foundation received 79 new applications for research grants and 6 applications for major equipment grants; of these, 27 new research grants were made and two major equipment grants were funded at a total cost of $1,016,702. In addition 29 ongoing grants were funded at a cost of $1,064,121. In 1987-88 the total sum for research grants was $2,080,823. and the numbers of research projects was 55.

Table 1.
Types of Research Grants Funded in 1987-88

	No. of Grants	
1. Description, measurement, tests	9	16%
2. Basic research	10	18%
3. Applied basic research	24	44%
4. Diagnosis, treatment, rehabilitation	12	22%
5. Operations research	—	—
6. Health promotion and prevention	—	—
	55	100%

Individual Awards

In 1987-88, 52 applications for individual awards (research scholarships, fellowships and the like) were received; of these, 21 were approved for support at a cost $539,560. In addition the Foundation supported 20 ongoing individual awards at a cost of $544,730. In 1987-88 the total sum for support of individual awards was $1,084,290. and the total number of individual awards was 41.

Table 2.
Types of Individual Awards Funded in 1987-88

	No. of Awards	
1. Description, measurement, tests	2	5%
2. Basic research	8	20%
3. Applied basic research	24	59%
4. Diagnosis, treatment, rehabilitation	7	16%
5. Operations research	—	—
6. Health promotion and prevention	—	—
	41	100%

A. List of Research Projects

1. Description, measurement and test development

Dr. M. Freedman **$37,508.**

Mount Sinai Hospital, Toronto

Comparative neuropsychology, dementia and depression.

In elderly patients it may be difficult to tell the difference between depression and dementia. Dr. Freedman planned an investigation to identify more clearly the two different disorders.

Drs. J. Holden and B. White **$45,000.**

Queen's University, Kingston

Identification of DNA markers closely linked to the mutation causing the fragile-X syndrome.

One type of mental retardation is due to a genetic mutation called the "Fragile-X" chromosome. The aim of this investigation was to find biological markers which will identify individuals who carry the mutation.

Dr. B. Levy **$34,377.**

McMaster University, Hamilton

Diagnosing and remediating processing skills related to reading failure.

This investigation aimed to pick up, earlier than is now done, children who have difficulty in learning to read; once these children have been detected special classes to remedy the deficiency can be put in hand.

Dr. M. Mian **$34,627.**

Hospital for Sick Children, Toronto

The effect of sexual abuse on preschool aged children.

Awareness and reporting the sexual abuse of young children is increasing. This study aims to establish the specific effects of abuse on pre-school girls.

Drs. K. Minde and N. Kenny **$46,336.**

Queen's University, Kingston

Diagnosis and treatment of sleep disorders in children.

(Including a major equipment grant)

The aim of the study is to assess sleep patterns in children aged 13-36 months who have a sleep disorder.

Dr. Y. Archibald, et al **$17,351.**

Victoria Hospital, London

Cognitive functioning in treated longterm survivors with slow-and-fast growing primary brain tumors.

Dr. Archibald is measuring the cognitive changes which are seen in patients who have had an operation on the brain to remove a tumor.

Dr. J. McGlone **$45,860.**

University Hospital, London

Early diagnosis of dementia - Alzheimer's type.

Dr. McGlone constructed psychological tests which will enable the diagnosis of Alzheimer's disease to be made earlier than is now usually possible.

Drs. K. Freund and R. Blanchard **$20,316.**

Clarke Institute of Psychiatry, Toronto

Assessing the diagnostic power of an objective test of dangerous sexual inclinations.

Most offenders who have been convicted of serious violent acts against women are eventually released. Dr. Freund is developing a test which he hopes will enable one to detect which of the offenders is likely to commit a dangerous offence again.

Dr. J. Connolly **$19,864.**

York University, Toronto

Adolescent peer relations and mental health: a method of inquiry.

It is known that disturbances of peer relations play a part in the mental health of adolescents. The social network mapping method will be a useful device for describing the health of adolescents more exactly.

2. Investigation of basic mechanisms

Drs. S. Goldberg and R. Simmons $37,576.

Hospital for Sick Children, Toronto
Impact of a chronic illness in an infant on the infant-mother interaction.
This investigation aimed at assessing the impact of chronic illness upon the development of infants. Current knowledge would lead one to suppose that the attachment of the child to the mother will be less secure if there has been a chronic illness and the investigation was designed to find out if this is true.

Dr. R. Mishra $41,387.

McMaster University, Hamilton
Production of monoclonal antibodies for dopamine receptor.
Dr. Mishra used a technique of molecular biology to develop monoclonal antibodies for the dopamine receptor. If he is successful in producing these antibodies it will be possible to carry out further work on the dopamine receptor which is thought to be important in the causation of schizophrenia.

Dr. D. Peters $39,512.

University of Ottawa
Effect of prenatal stress on brain development.
This grant supported the latest stage of a continuing investigation to find out what are the effects of prenatal stress upon the development of adults.

Dr. B. Scott $25,000.

Surrey Place Centre, Toronto
Effect of aging on neuronal electric membrane properties.
The operations of the brain change as brain cells grow older. The physiological basis for these changes is not known. This investigation tested some of the leading hypotheses which have been put forward to account for aging in brain cells.

Dr. S. Goldberg $37,890.

Hospital for Sick Children, Toronto
Atypical attachment in risk population.
Dr. Goldberg has been examining children who have suffered a variety of disadvantages — low-birth-weight, developmental delay, chronic illness and poverty leading to malnutrition to discover in what way these conditions lead to a failure of an attachment to develop between the mother and the child.

Dr. L. Niles $40,587.

McMaster University, Hamilton
Brain target sites for melatonin and n-acetyl-5-methoxy kynurenamine: modulation of GABAergic function and cyclic nucleotide synthesis.
Dr. Niles is examining how the pineal gland influences brain homeostasis and neurotransmitter function throughout the brain.

Dr. C. Greenwood $50,510.

University of Toronto
Alterations in monoamine receptor availability after methionine administration.
Dr. Greenwood is conducting a basic investigation to show if brain nerve receptors have their availability altered by the administration of particular drugs.

Dr. P. Carlen, et al $45,634.

Toronto Western Hospital
Altered sedative - hypnotic drug responses and excitable membrane properties of neurons from aged compared to younger mature rats.
Dr. Carlen is examining some of the mechanisms which underly the way in which older brain cells respond to the administration of drugs.

Dr. F. Vaccarino $10,220.

University of Toronto
Cholecystokinin/dopamine interaction in reward function and behavioural activation.
Dr. Vaccarino is studying the interaction of two different neurotransmitters in the brain: cholecystokinin and dopamine.

Dr. P. Seeman **$79,764.**

University of Toronto
Dopamine receptors in schizophrenia, a program approach.
Dr. Seeman is examining the theory that schizophrenia is due to an abnormality associated with dopamine in the brain. He proposes that there is an abnormality in the receptors for this neurotransmitter in brain cells.

3. Basic mechanisms in specific diseases

Dr. J. Callahan **$25,000.**

Hospital for Sick Children, Toronto
Peroxisomes and disease.
In some children's diseases there is a disorder of enzymes in patients' cells. But the precise nature of the chemical disorder is not known. This investigation was directed at establishing the chemical events which cause the disorder.

Dr. P. Chang **$56,959.**

McMaster University, Hamilton
Pseudosulfatase deficiency - molecular explanation for its escape from neurodegeneration.
An enzyme deficiency associated with a degenerative disease of the nervous system has been found in both patients and in normal individuals. Dr. Chang attempted to find out why some, who have the chemical deficiency, do not develop the disease.

Dr. D. Crapper-McLachlan, et al **$52,000.**

University of Toronto
Gene expression in senile and presenile dementia of Alzheimer type.
This investigation used recombinant DNA technology to examine the way genes express themselves in individuals suffering from Alzheimer's disease. An alteration in gene expression is thought to lead to an alteration in the function and survival of brain cells.

Drs. R. Glueckauf and A. Quittner **$8,572.**

University Hospital, London
The effects of social support and personality variables on maternal adaptation to the stress of a hearing impaired child.
A deaf child can be a major source of stress to the family. This investigation was concerned with the influence which the mother's personality has in regulating the impact of a deaf child in the family.

Dr. K. Jhamandas, et al **$62,975.**

Queen's University, Kingston
Pharmacologic protection and reversal of cortical cholinergic deficit induced by endogenous neurotoxin quinolonic acid.
A feature of Alzheimer's disease is a degeneration in the forebrain and the cerebral cortex; some substances produce this degeneration and other substances protect the brain. This investigation was designed to find out more about the action of substances which produce the effect and those which diminish it.

Dr. R. Mishra **$36,556.**

McMaster University, Hamilton
Studies on the modulatory effect of hypothalamic factor l-prolyl-l-leucyl-glycinamide on biogenicamine receptors.
Dr. Mishra investigated the mode of action of a naturally occurring chemical substance which may help to prevent tardive dyskinesia and relapse in schizophrenia.

Dr. T. Morley **$50,000.**

Canadian Brain Tissue Bank, Toronto
The study of brain tissue collected from patients, who during life had a psychotic or organic disease, is important to establishing the physiological basis of mental disease. The Canadian Brain Tissue Bank is an important source of tissue for researchers across Canada.

Drs. R. Pivik and Y. Lapierre **$31,029.**

Ottawa General Hospital
Concordance among biological markers for schizophrenia.
Schizophrenia is a disorder which is sometimes difficult to diagnose. Dr. Pivik investigated ways to make diagnosis more certain by using behavioural and biological "markers".

Drs. R. Rylett and H. Colhoun **$39,070.**

University of Western Ontario, London
Studies on cholinergic hypofunction induced in rats by choline mustard: a possible animal model for Alzheimer's disease.
Research into human diseases is aided if there is an animal "model" for the illness. This investigation examined an animal model for Alzheimer's disease.

Dr. R. Schachar **$37,181.**

Hospital for Sick Children, Toronto
Studies of attention in children with attention deficit disorders and hyperactivity.
Hyperactive children, with attention deficit disorder, are not able to pay proper heed to what is happening around them. This investigation was designed to find out more precisely why it is that these children find it difficult to control their reactions.

Dr. B. Scott, et al **$35,000.**

Surrey Place Centre, Toronto
Neurobiological investigations of Down's syndrome and mouse trisomy 16.
This investigation was designed to find out more about the disorders of cell physiology which affects the brains of Down's patients.

Dr. P. Seeman **$62,359.**

University of Toronto
Purification of brain dopamine receptors.
A leading hypothesis to account for schizophrenia is that there is an alteration in the way the brain cells of patients react to a neurotransmitter chemical: dopamine. This investigation was designed to find out more about the dopamine receptor.

Dr. S. Southmayd, et al **$14,429.**

Kingston Psychiatric Hospital
The effects of daytime sleep on nocturnal sleep disturbance in depression.
Depression is a disease marked by a disorder of the sleep-wake cycle. It is not known to what extent the night-time sleep disorder, which has been studied in detail, is associated with day-time sleeping. This investigation recorded sleep "round the clock" in depressed patients.

Dr. D. Stuss, et al **$54,589.**

Ottawa General Hospital
Attentional disorders in closed head injury.
Closed head injury is a major public health problem. This investigation was designed to find out what changes take place in the ability of people who have had such injuries to process information.

Dr. B. Toner **$36,078.**

Clarke Institute of Psychiatry, Toronto
Irritable bowel syndrome: a cognitive attentional model.
The basis for this illness remain uncertain. Dr. Toner is investigating the prospect that the source of the illness lies in the way people interpret signals arising from bodily events.

Drs. G. Rodin and C. Littlefield **$38,552.**

Toronto General Hospital
Predicting adjustment and psychosocial morbidity in the medically ill.
Dr. Rodin's studies are designed to examine how people adapt to a chronic medical illness. The extent to which psychological disorder occurs among medical patients is a cause for concern.

Dr. M. Moscovitch, et al **$30,332.**

University of Toronto
Effects of perinatal lesions in the caudate nucleus.
Premature babies often suffer from a hemorrhage which causes blood to leak into the frontal portions of the brain. Dr. Moscovitch is taking advantage of this "experiment of nature" to look into the effects of damage, which occurs early in life, upon memory in later life.

Dr. U. Deboni **$52,761.**

University of Toronto
Fundamental studies on the etiology of Alzheimer's disease.
Dr. Deboni is examining how the filaments which are found in cells of Alzheimer's patients could be the result of an alteration in the way genes in the affected cells express themselves.

Ms. J. Levene and Dr. M. Seeman $31,046.

Clarke Institute of Psychiatry, Toronto
The prediction of length of time to relapse from family functioning and expressed emotion in families of schizophrenics.
There is now evidence which suggests that family interactions influence the course of schizophrenic illness. The study aims to measure whether expressed emotion and the function of the family predict recurrences of a schizophrenic illness.

Dr. P. Marton, et al $28,436.

C. M. Hincks Treatment Centre, Toronto
The social competence of adolescents with depressive disorders.
Dr. Marton has examined the effects of depression on adolescent development. He is continuing his work to find out whether depressed adolescents are vulnerable to personality disorder as they grow up.

Dr. D. Pederson, et al $20,256.

University of Western Ontario, London
Maternal stress and social support as predictors of the quality of the infants' home environment for mothers of preterm and full-term infants.
Dr. Pederson is examining the stress imposed upon the mother by delivering a premature baby and the extent which these are mitigated by the social support available to her.
(This project was jointly funded by the Ontario Mental Health Foundation and the Ministry of Community and Social Services.)

Dr. R. Simmons $29,100.

Hospital for Sick Children, Toronto
Investigation of family function and psychopathology of adolescent psychiatric emergencies.
Dr. Simmons is comparing families in which emergencies occur with other families where there are psychiatric difficulties but in which no emergencies occur. The aim is to find out factors which precipitate adolescent psychiatric crises.

Dr. I. Gotlib $58,023.

University of Western Ontario, London
The effects of postpartum depression on infant development.
Mothers, who have delivered a baby, sometimes fall victim to a depression. Dr. Gotlib is examining the nature of the interactions between depressed mothers and their infants.

Dr. S. Kish $9,400.

Clarke Institute of Psychiatry, Toronto
Neurochemical study of the brain in neuroleptic malignant hyperthermia.
There is an unwanted and often fatal complication of neuroleptic drugs called neuroleptic malignant syndrome. Dr. Kish is carrying out a study of changes in the neurochemistry of the brains of individuals who died with this complication of drug administration.

4. Studies of diagnosis, treatment and rehabilitation

Dr. K. Boydell, et al $27,575.

Queen Street Mental Health Centre, Toronto
The chronic schizophrenic in the community; a socio-epidemiologic study using survival analysis.
This investigation followed patients discharged from a psychiatric hospital to discover the role housing, social support and clinical state, play in governing continuing remission, or relapse and subsequent return to hospital.

Drs. J. Davis and C. Cunningham $37,033.

Chedoke-McMaster Hospital, Hamilton
Social skills training with developmentally handicapped adults.
This investigation tested ways of teaching adult skills to the mentally handicapped. The work builds on earlier studies attempted to enhance patients' skills so that they can be used in the "real" world.

Dr. M. Feldman **$50,000.**

Surrey Place Centre, Toronto
Evaluation of a parent education program for low-IQ parents and their children.
Children of mentally retarded parents are nowadays reared more often by their families although they are at risk for neglect and maltreatment. This study provided an educational package for the parents who are undertaking to care for their own offspring. (This project was jointly funded by the Ontario Mental Health Foundation and the Ministry of Community and Social Services.)

Drs. G. Harris and M. Rice **$30,080.**

Mental Health Centre, Penetanguishene
Psychopathy and treatment efficacy in a maximum security therapeutic community: a follow-up study.
Few studies have been conducted to find out the effects of treatment in psychopathy. This study was a retrospective investigation of individuals who were diagnosed as psychopaths and treated while they were in prison.

Drs. D. MacCrimmon and G. Jones **$32,561**

Hamilton Psychiatric Hospital
Carbamazepine therapy and procaine activated, computer analysed EEG in treatment resistant schizophrenic psychoses.
Experience shows that some schizophrenic patients who are resistant to the usual treatments respond to an anti-epileptic drug. This study aimed to identify patients likely to benefit from the use of anti-epileptic drugs.

Drs. B. Martin and A. Peter **$18,797.**

Clarke Institute of Psychiatry, Toronto
ECT and schizophrenia: an examination of indications and dosage.
The use of ECT in the treatment of schizophrenia is still an unsettled issue. This study aimed to find out if those schizophrenics who respond most favourably to ECT are those who have an emotional disturbance.

Dr. R. Schachar **$18,995.**

Hospital for Sick Children, Toronto
The effect of methylphenidate on behavior and attention.
The treatment of hyperactive children by methylphenidate causes concern; the prognosis for treated children is not more favourable than for children who do not get treated – even though there are short term beneficial effects. This investigation was designed to find out more about the ways in which this drug acts.

Drs. M. Steiner and E. Werstiuk **$36,801.**

St. Joseph's Hospital, Hamilton
How does electroconvulsive therapy (ECT) work?
Electroconvulsive therapy is used to treat depressive patients. Although it is an effective treatment for some patients it is not known why it works. This investigation was designed to study one of the major hypotheses which has been put forward as a possible explanation.

Dr. M. Lovett **$61,317.**

Hospital for Sick Children, Toronto
Training and transfer effects in dyslexic children's response to remedial treatment.
About eleven percent of boys and three percent of girls are affected by dyslexia which hinders learning to read and write. Dr. Lovett is carrying out an investigation to find out which training programmes are most effective in remediating this condition.

Dr. H. Munroe-Blum, et al **$41,588.**

McMaster University, Hamilton
A randomized clinical trial of specific time-limited group treatment (SGTB) of borderline patients.
Dr. Munroe-Blum is examining the effect of group treatment upon borderline patients. Individual psychotherapy is not helpful with these patients and Dr. Munroe-Blum is looking to see if group therapy is effective.

Drs. P. Hrdina and Y. Lapierre **$67,630.**

University of Ottawa
Therapeutic range and prospective dosing of antidepressants.
(including a major equipment grant)
This project is designed to investigate whether there is a relationship between the therapeutic outcome of drug treatment in depression and the levels of the drug which can be measured in blood.

Drs. D. Pepler and R. Mae **$49,424.**

Earlscourt Child and Family Centre, Toronto
Social skills training with aggressive children.
This investigation is aimed at modifying the behaviour of children who are aggressive by providing them with training in social skills.

B. List of individual awards

1. Description, measurement and test development

Dr. L. Alcorn (research fellowship)

Baycrest Hospital, Toronto
Neuropsychological assessment of analytic emotion processing skills
Dr. Alcorn measured the way in which people who have had brain damage express their emotions.

Dr. J. Fleming (research fellowship)

McMaster University, Hamilton
Childhood depression.
Dr. Fleming is assessing the prevalence of depression in children.

2. Investigation of basic mechanisms

Dr. R. Mishra (research associate)

McMaster University, Hamilton
Studies on the mechanism of modulatory effect of PLG on dopamine receptors in CNS.
Dr. Mishra is examining the way in which the dopamine receptor, thought to be important in schizophrenia, operates in the brain.

Dr. M. Moscovitch (research associate)

University of Toronto
Memory disorders in old people, organic amnesics and patients undergoing electroconvulsive therapy (ECT).
Dr. Moscovitch is examining the way in which memory fails in both normal amnesia and in Alzheimer's disease.

Dr. H. Szechtman (research associate)

McMaster University, Hamilton
Dopamine and sensory attentiveness.
Dr. Szechtman is examining a number of behavioural changes which follow alterations in brain dopamine systems.

Dr. L. Archer (research fellowship)

McMaster University, Hamilton
Neurological and psychiatric aspects of developmental language disorder.
Dr. Archer is examining the way in which language difficulties in children are associated with psychiatric disorders.

Dr. L. Niles (long-term fellowship)

McMaster University, Hamilton
Brain target sites for melatonin and n-acetyl-5-methoxykynurenamine: modulation of GABAergic function and cyclic nucleotide synthesis.
Dr. Niles is examining changes in brain chemistry which take place, due to daily rhythms of light and dark.

Dr. B. Orpen (research fellowship)

St. Joseph's Hospital, Hamilton
Neurochemical control of the circadian system.
Dr. Orpen is studying the anatomy and chemistry of brain regions which control the body's system of circadian rhythms.

2. Investigation of basic mechanisms

Mr. D. Clow (research studentship)

Queen's University, Kingston
Neuropeptide modulation of neurotransmitter release.
Mr. Clow examined how neurotransmitters in the brain are controlled by the chemicals which are used in treatment.

Ms. D. Von Hessert (research student)

McMaster University, Hamilton
Hemispheric specialization in dyslexia subtypes.
Ms. Von Hessert is examining ways in which the two halves of the brain are specialized for different kinds of function.

3. Basic mechanisms in specific diseases

Dr. J. Cleghorn (clinical research and development scientist)

McMaster University, Hamilton
Dr. Cleghorn is developing a programme for training clinical investigators. In addition, he is carrying on investigations to elucidate the brain chemistry of patients with schizophrenia.

Dr. G. Brown (research associate)

McMaster University, Hamilton
Dr. Gregory Brown is directing a research programme which examines the role of brain chemicals in psychiatric disorders.

Dr. D. Campbell (research associate)

McMaster University, Hamilton
Dr. D. Campbell worked on two topics: the development of low-birth-weight-infants, and the causation of anxiety disorders.

Dr. U. Deboni (research associate)
University of Toronto
Fundamental studies on the etiology of Alzheimer's disease.
Dr. Deboni is studying the causes of Alzheimer's disease.

Dr. M. Dennis (research associate)

The Hospital for Sick Children, Toronto
The effects of congenital, infantile and post-infantile damage to the brain in subsequent intelligence.
Dr. Maureen Dennis is carrying out a survey using psychological tests to show the effects of brain damage in early life.

Dr. R. Pivik (research associate)

Ottawa General Hospital
Electrophysiological correlates of psychosis/ electrophysiological studies of childhood disorders/ developmental studies of arousal thresholds during sleep/neurophysiological studies of sleep-wakefulness and immobility in the rabbit.
Dr. Pivik is examining schizophrenic patients and patients with sleep disorders using electrophysiological methods.

Dr. J. Seggie (research associate)

McMaster University, Hamilton
A pineal-retinal-hypothalmic theory of depression.
Dr. Seggie is documenting connections between normal circadian variations of physiological function, circadian rhythms in nature and disturbances in these rhythms in depression.

Dr. A. Baskys (Alzheimer's Scholarship)

University of Toronto
Alterations in CNS synaptic plasticity and drug interactions in aged rats (a model for Alzheimer's disease).
Dr. Baskys is looking at changes which take place in aging brain cells as a factor in the causation of Alzheimer's disease.

Dr. P. Chang (research scholarship)

McMaster University, Hamilton
Pseudo sulfatase deficiency - molecular explanation for its escape from neurodegeneration.
Dr. Chang discovered that there are individuals who have a cellular anomaly but do not have the disease which usually follows. This "experiment of nature" allows her to investigate why some individuals are protected from the disease.

Dr. J. Finegan (research scholarship)

The Hospital for Sick Children, Toronto
Prenatal testosterone and postnatal behaviour and cognition: a statement of proposed research.
Dr. Finegan is continuing her work to find out more about the psychological and educational changes which take place in children who have had differing exposure to hormones prenatally.

Dr. C. Gibson (research scholarship)

University of Western Ontario, London
Noradrenergic systems in aging and dementia.
Dr. Gibson is examining the role of the noradrenergic system, in the causation of Alzheimer's disease.

Dr. M. Lovett (research scholarship)

The Hospital for Sick Children, Toronto
Diagnostic and treatment studies on developmental dyslexia.
Dr. Lovett is carrying out an investigation into the factors which cause dyslexia, or difficulty to read which is found in school-age children.

Dr. S. Brudzynski (long-term fellowship)

University Hospital, London
Involvement of the central cholinergic system in regulation of behaviour.
Dr. Brudzynski is examining the role of the cholinergic system which is particularly related to emotional behaviour.

Dr. D. Clapin (long-term fellowship)

University of Ottawa
Chemical structure of paired helical filaments.
Dr. Clapin investigated the chemical nature of the paired helical filaments seen in the brain cells of Alzheimer's patients.

Dr. E. Grof (long-term fellowship)

McMaster University, Hamilton
Neuroendocrinology of affective disorders.
Dr. Grof is carrying out investigations to discover what changes take place in brain hormone systems during depression.

Dr. P. Li (research fellowship)

Clarke Institute of Psychiatry, Toronto
Effects of antidepressant and antimanic agents on inositol phospholipid metabolism.
Dr. Li is carrying out an investigation of the effects of drugs which are used to treat depression.

Dr. S. Mackay-Soroka (research fellowship)

University of Toronto
Referential communication between mothers and their hearing-impaired children.
Dr. Mackay-Soroka examined the impairment of communication skills which occurs in hearing-impaired children.

Dr. M. Mauri (research fellowship)

Queen's University, Kingston
The role of sleep pattern fluctuation in PMS.
Dr. Mauri is examining changes in sleep pattern in women who have the premenstrual syndrome.

Dr. J. Olds (research fellowship)

The Hospital for Sick Children, Toronto
Acquisition processes in disabled and early reading.
Dr. Olds examined the learning disabilities seen in children with dyslexia.

Dr. R. Styra (research fellowship)

St. Michael's Hospital, Toronto
Coping with breast cancer.
Dr. Styra examined a group of women who were diagnosed as having cancer of the breast; she was interested in finding out the different ways in which women coped with this threatening diagnosis.

Ms. N. Bzowej (research studentship)

University of Toronto
Effects of long-term neuroleptics on dopamine receptor density in post-mortem brains from patients who had Alzheimer's disease or schizophrenia.
Ms. Bzowej looked at the effects of the drugs which are used to treat schizophrenia upon the dopamine receptor in the brain.

Mr. J. Francis (research studentship)

University of Toronto
The chronic effects of anticonvulsant and anxiolytic drugs on CNS phenytoin binding sites. Isolation, purification and characterization of an endogenous peptide ligand for these sites.
Mr. Francis is examining the mechanisms which underly epilepsy and the use of anti-epileptic drugs.

Ms. L. Mercier (research studentship)

University of Ottawa
Physiological studies in learning disabled children.
Ms. Mercier is studying the physiological characteristics of children who suffer from learning disabilities.

Mr. G. Ross (research studentship)

McMaster University, Hamilton
Photoaffinity labelling of the D1 (adenylate cyclase linked) dopamine receptor from bovine caudate nucleus.
Mr. Ross examined a technique which may be useful in examining how dopamine is used in the brain.

4. Studies of diagnosis, treatment and rehabilitation

Dr. P. Schmidt (training award)

Clarke Institute of Psychiatry, Toronto
Dr. Schmidt studied liaison psychiatry at the National Institute of Health in Washington, D.C.

Dr. P. Rosenbaum (conference program)

Chedoke Child and Family Centre, Hamilton
Child psychiatry and developmental pediatrics.
Dr. Rosenbaum organised a conference in which modern developments in child psychiatry and developmental pediatrics were presented.

Dr. D. Garner (research associate)

Toronto General Hospital
Anorexia nervosa and bulimia nervosa research program.
Dr. Garner examined the effects of different kinds of treatment in the eating disorders.

Dr. C. Littlefield (long-term fellowship)

Toronto General Hospital
Adaptation and psychopathology in the medically ill.
Dr. Littlefield is examining psychological changes in patients with medical illnesses. Patients with medical illnesses may often have, although unnoticed, psychiatric disorders.

Dr. E. Werstiuk (long-term fellowship)

McMaster University, Hamilton
Biological studies relevant to depression.
Dr. Werstiuk is collaborating with colleagues in an investigation to find out what changes take place in the brain with the use of electroconvulsive therapy.

Dr. R. Davis (research fellowship)

Toronto General Hospital
A controlled study of cognitive-behavioural treatment for bulimia nervosa.
Dr. Davis investigated different forms of treatment for bulimia nervosa.

Mr. K. Murphy (research studentship)

University of Ottawa
Letting people know you like them. Assessing and ameliorating children's peer relations through affect communication skills training.
Mr. Murphy is examining ways in which children's ability to get on with their peers can be improved through training.

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